

NWS: EHB-6, Software Note 22

DoD: TO 31P1-4-108-608

FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

RADAR PRODUCT GENERATOR (RPG) GROUP SOFTWARE BUILD 4.0

DOPPLER METEOROLOGICAL RADAR WSR-88D



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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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1. SUBJECT

Radar Product Generator (RPG) Group Software Build 4.0.

2. PURPOSE

This modification provides instructions and software for loading the new RPG Build 4.0 software. This document is issued under Radar Operations Center (ROC) Engineering Change Proposal (ECP) 0182, RPG Software Build 4.0.

Specifically, RPG Software Build 4.0 provides the following enhancements:

- New Mesocyclone Rapid Update product
- New Enhanced Echo Tops product
- The following products were removed from the RPG: Weak Echo Region, Echo Tops Contour, Composite Reflectivity Contours, Combined Shear Contour, Combined Moment, and Spectrum Width Cross Section.
- Additional corrections have been made to the Precipitation Preprocessing Subsystem to handle truncation and the size of rate and accumulation arrays for new VCPs.
- Improvements in memory utilization for the high resolution Vertically Integrated Liquid algorithm
- Adaptation Data Merge capability
- The elevation/cuts column is modified and has increased capability on the RPG Product Generation Table Editor window and the RPG Product Distribution Control windows.

Upon completion of the software load, the following windows may be accessed to show some of the changes incorporated into the new build:

- RPG/Control Status window shows the software build number (e.g. B4.0) in the lower right corner of the screen. The software version is also distributed to all users in the General Status Message (GSM).
- In the HCI, click on the **RPG Products** button, then click the **Selectable Parameters** button. Verify Contour Product is no longer available.

The actual downtime for the RPG will be approximately 2 hours when no data will be available while Build 4.0 is being loaded.

For FAA Redundant sites, RPG Software Build 4.0 should first be loaded on one channel and the Distant Master System Control Function (DMSCF). The other channel can be operating on the old software build during this time. However, the channel on the old

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build must be shut down before Build 4.0 is brought up on the first channel to avoid cross-talk between the different software builds (these steps are covered in the attachments).

For additional information concerning this document, contact the WSR-88D Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at NEXRAD.Hotline@noaa.gov. An electronic copy of this document can be found at the following Internet address:
www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp

3. SITES AFFECTED

See [ATTACHMENT 5](#) for site effectivity.

4. ESTIMATED COMPLETION DATE

This modification must be reported completed no later than 60 days after receipt of this kit.

5. EQUIPMENT AFFECTED

Radar Product Generator Group.

6. SPARES AFFECTED

Not applicable.

7. MODIFICATION ACCOMPLISHED BY

Site electronic systems analysts and/or electronics technicians will accomplish this task. One technician is required to perform these procedures. Operators may assist with [ATTACHMENT 4](#).

8. MATERIALS REQUIRED

The following kit will be required to install RPG Software Build 4.0. NWS sites that have a DoD MSCF will receive a separate kit for the DoD MSCF.

Nomenclature	Qty
CD-ROM, RPG LOAD MEDIA Version 4.0 (these are two identical CD-ROMs)	2
CD-ROM, EPSS Files (Electronic Performance Support System)	1
3.5 inch diskette, RPG ADAPTATION DATA or MSCF ADAPTATION DATA	1

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Nomenclature	Qty
Release Notes, RPG Software Build 4.0	1
* Formatted 3.5 inch diskettes.	3

* Site will provide.

9. SOURCE OF MATERIALS

The items in paragraph 8 will be shipped to each site by the National Weather Service (NWS) ROC. Items annotated by an asterisk will be provided by the site.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Not applicable.

11. TIME AND PERSONNEL REQUIRED

Work Phases	NWS Configuration (Hours)	DoD Configuration (Hours)	FAA Configuration (Hours)
Unpacking	0.1	0.1	0.1
Coordination	0.1	0.1	0.1
Installation	MSCF: 1.0 RPG: 1.0 BDDS: 0.7	Distant MSCF: 1.0 RPG: 1.0 Remote BDDS: 0.7	Distant MSCF: 1.0 First RPG: 1.1 Second RPG: 0.9
Data Restoration	0.1	0.1	0.1
Total Work-hours	3.0	3.0	3.3

12. DOCUMENTS AFFECTED

a. Operations Instructions, Radar Product Generation (RPG), Revision 1, dated 30 September 2003

NWS: EHB 6-526, Revision 1
DoD: AFTO 31P1-4-108-451-1, Revision 1
FAA: TI 6345.1 V50, Revision 1

b. Guidance on Adaptable Parameters, Revision 1, dated 31 March 2003

NWS: WSR-88D Handbook Volume 4, ORPG, Revision 1, Change 1

13. VERIFICATION STATEMENT

This modification was successfully installed at Atlanta, Georgia; Knoxville, Tennessee; South Kauai, Hawaii; Sacramento, California; Beale AFB, California; and Reno, Nevada.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

Not applicable.

15. PROCEDURES

Perform the following procedures that apply for your site. NWS sites may also need to perform the procedures in [ATTACHMENT 1](#), [ATTACHMENT 3](#), and [ATTACHMENT 4](#) for each DoD or FAA related MSCF. It is expected that the RPG, corresponding MSCF, and the corresponding BDDS (if applicable) will be loaded on the same date. If the MSCF and/or BDDS (Base Data Distribution System) processors are located remotely from the RPG, then it is imperative that a load date be agreed upon for all three components by the affected maintainers.

The NEXRAD site Unit Radar Committee (URC) chairman must coordinate downtime with all dedicated users in accordance with Interagency NEXRAD Operation Memorandum of Agreement (MOA).

- [ATTACHMENT 1](#), MSCF Software Build 4.0 Load Instructions
- [ATTACHMENT 2](#), RPG Software Build 4.0 Load Instructions
- [ATTACHMENT 3](#), BDDS Software Build 4.0 Load Instructions
- [ATTACHMENT 4](#), MSCF Restoration

16. FAA DISTRIBUTION

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

17. CHANGES TO TABLE OF CONTENTS (FAA)

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

To obtain additional copies of this publication, contact Printing and Distribution Team, AMI-700B, at (405) 954-3771.

18. RECOMMENDATIONS FOR CHANGES (FAA)

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

19. REPORTING INSTRUCTIONS

a. NWS

Report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in NWS Instruction 30-2104, Maintenance Documentation, Part 4 and Appendix E. Include the following information on the EMRS report:

- (1) An Equipment Code of MSCF in Block 7.
- (2) The appropriate serial number in Block 8.
- (3) A Mod No. of S22 in Block 17a.

A sample EMRS report is provided as [ATTACHMENT 7](#).

b. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

c. FAA

Enter this directive number, date, and chapter number on the appropriate FAA Form 6032-1, Airway Facilities Modification Record.

Use the Maintenance Management System (MMS) application Log Equipment Modification (LEM) function to report the completion of this modification. Verify N is in the REP COD field to ensure the log entry will be upward reportable to the national data base for access by AOS. If not found in the LEM database, this change should be entered into the LEM fields as follows:

- (1) Order No.: 6345.1
- (2) Chapter: 40
- (3) Change: 43

d. DoD and FAA

Complete [ATTACHMENT 6](#) and return the information to the ROC by one of the methods below:

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- (1) Mail Address: Program Branch, Configuration Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, Oklahoma 73072-8028
- (2) Fax Number: (405) 366-6553
ATTN: Configuration Management Team
- (3) E-mail Address: NEXRAD.CM.comments@noaa.gov
- (4) Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

ATTACHMENT 1

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Technical Manuals Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 1, dated
30 April 2003
NWS: EHB 6-525, Revision 1
DoD: AFTO 31P1-4-108-452-1, Revision 1
FAA: Order 6345.1 V49, Revision 1

Material Required:

None

Initial Conditions:

If the MSCF and/or the Base Data Distribution Server (BDDS) is located remotely (i.e., DoD or FAA configurations) from the RPG, the System Administrator must coordinate the load date with the MSCF and BDDS locations to determine a mutually agreed upon load date.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

NOTES

The full system load script will automatically backup user IDs and passwords in case backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).

If the following full system software load is aborted on the MSCF for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with EHB 6-525, Table 4–83 after the full software load is successfully completed (following step 32). EHB 6-525, Table 4–83 has the necessary steps to also relink user accounts to the MSCF applications software so that all users can access the MSCF applications.

Backup/restoral of user account data is not mandatory. However, if there are important logs or graphic screen captures stored in the user account directories, and if these need to be retained, then backup the MSCF user account directories using the procedures specified in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA Order 6345.1 V49, Table 4-62. Installer should ensure site's list of user accounts is available if inadvertently deleted during this load process.

Step	Action/Response	Comments
1	If not logged in, login as a regular site user (i.e., a site-specific user account).	
2	At the HCI, in the RPG Box, click on the Products button.	This opens the RPG Products window.
3	In the <code>RPG Products</code> window, click on the Alert/Threshold button.	This opens the Alert Threshold Editor window.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
4	<p>The Alert Threshold Editor window opens with the Grid Group as the default. Go to the far right column, Paired Product, and check each paired product against the list below to make sure it will not be deleted in Build 4.0. The following products are the ones being deleted:</p> <ul style="list-style-type: none"> #39 Composite Reflectivity Contour #40 Composite Reflectivity Contour #42 Echo Tops Contour #49 Combined Moment #52 Spectrum Width Cross Section #53 Weak Echo Region #88 Combined Shear Contour <p>If any of these products are currently in the Paired Product column, then they must be changed to a product that will still be in Build 4.0. The site operator or the meteorological NEXRAD focal point can provide other recommendations for new paired products, if necessary. (For #53, Weak Echo Region, recommend the new Paired Product be #50, RCS - Reflectivity Cross Section).</p> <p>If none are listed, then skip to the next step.</p> <p>If any are listed, do the following:</p> <ul style="list-style-type: none"> - Click on the padlock in the upper right hand corner of the Alert Threshold Editor window, and do the next three actions. <ul style="list-style-type: none"> 1. Click on the URC button. 2. Click in the password: edit box. 3. Enter the URC password, then press <CR>. - In the Paired Products column, click on the pull down menu arrow to the left of the product number. - Click on the new desired product. The product then automatically replaces the former paired product and returns the operator to the Alert Threshold Editor window. 	

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
5	<p>Still in the <code>Alert Threshold Editor</code> window, click on the Volume Group button. Go to the far right column, <code>Paired Product</code>, and check each paired product against the list below to make sure it will not be deleted in Build 4.0. The following products are the ones being deleted:</p> <ul style="list-style-type: none"> #39 Composite Reflectivity Contour #40 Composite Reflectivity Contour #42 Echo Tops Contour #49 Combined Moment #52 Spectrum Width Cross Section #53 Weak Echo Region #88 Combined Shear Contour <p>If any of these products are currently in the <code>Paired Product</code> column, then they must be changed to a product that will still be in Build 4.0. The site operator or the meteorological NEXRAD focal point can provide other recommendations for new paired products, if necessary. (For #53, Weak Echo Region, recommend the new Paired Product be #50, RCS - Reflectivity Cross Section).</p> <p>If none are listed, then skip to the next step.</p> <p>If any are listed, do the following:</p> <ul style="list-style-type: none"> - If the padlock is not already open, click on the padlock in the upper right hand corner of the <code>Alert Threshold Editor</code> window, and do the next three actions. <ul style="list-style-type: none"> 1. Click on the URC button. 2. Click in the <code>password:</code> edit box. 3. Enter the URC password, then press <CR>. - In the <code>Paired Product</code> column, click on the pull down menu arrow to the left of the product number. - Click on the new desired product. The product then automatically replaces the former paired product and returns the operator to the <code>Alert Threshold Editor</code> window. 	

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
6	<p>Still in the <code>Alert Threshold Editor</code> window, click on the Forecast Group button. Go to the far right column, <code>Paired Product</code>, and check each paired product against the list below to make sure it will not be deleted in Build 4.0. The following products are the ones being deleted:</p> <ul style="list-style-type: none"> #39 Composite Reflectivity Contour #40 Composite Reflectivity Contour #42 Echo Tops Contour #49 Combined Moment #52 Spectrum Width Cross Section #53 Weak Echo Region #88 Combined Shear Contour <p>If any of these products are currently in the <code>Paired Product</code> column, then they must be changed to a product that will still be in Build 4.0. The site operator or the meteorological NEXRAD focal point can provide other recommendations for new paired products, if necessary. (For #53, Weak Echo Region, recommend the new <code>Paired Product</code> be #50, RCS - Reflectivity Cross Section).</p> <p>If none are listed, then skip to the next step.</p> <p>If any are listed, do the following:</p> <ul style="list-style-type: none"> - If the padlock is not already open, click on the padlock in the upper right hand corner of the <code>Alert Threshold Editor</code> window, and do the next three actions. <ul style="list-style-type: none"> 1. Click on the URC button. 2. Click in the <code>password:</code> edit box. 3. Enter the URC password, then press <CR>. - In the <code>Paired Product</code> column, click on the pull down menu arrow to the left of the product number. - Click on the new desired product. The product then automatically replaces the former paired product and returns the operator to the <code>Alert Threshold Editor</code> window. 	

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
7	In the Alert Threshold Editor window, if any changes were made, click on the Save button and Yes to save the changes.	
8	Close the Alert Threshold Editor window by clicking on the Close button.	
9	In the RPG Products window, click on the Algorithms button.	The Algorithms window appears.
10	In the Algorithms window, second line, Adaptation Item scroll box, scroll down to the Hydromet Rate algorithm and click on Hydromet Rate .	The Hydromet Rate algorithm appears.
11	In the Hydromet Rate algorithm, the third line from the bottom is the Max Precipitation Rate (MXPRA). Write down the value of the MXPRA _____. This value will be used in ATTACHMENT 4 to restore the URC value.	
12	Close the Algorithms window by clicking on the Close button.	
13	If still open, close the RPG Products window by clicking on the Close button.	
14	Close all windows, including those minimized.	This leaves the user at the CDE level.
<p style="text-align: center;">NOTE</p> <p>Steps 15 through 16 contain methods to halt a system in a normal manner.</p> <p>Should these methods not work and there is no ok prompt, (possible system corruption), use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot. This stops the boot process. Then proceed to step 17.</p>		

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
15	Exit out of Common Desktop Environment (CDE) by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the Logout Confirmation window.	Leaves the CDE.
16	Push the button below the green LED on the front of the MSCF Processor. This should take approximately 20 seconds to complete the shutdown.	Halts the system and the system goes to an <code>ok</code> prompt.
17	Open the CD-ROM drive at the MSCF, place the CD-ROM labeled <u>RPG LOAD MEDIA Version 4.0</u> , into the CD-ROM drive and close the cradle.	Your site received two copies of identical software. Either copy can be used.
18	At the <code>ok</code> prompt, enter: set-defaults<CR>	This ensures all Non-Volatile Random Access Memory (NVRAM) settings are returned to default values.
19	At the <code>ok</code> prompt, enter: boot cdrom<CR>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ...</code> message.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If the load starts and it is then realized that an incorrect entry was made, let the software complete its load and then start this procedure over at Step 14. If the load is aborted while in progress, all user accounts will be lost.</p>		
20	<p>In approximately 2 minutes, when the following message appears:</p> <p>Choose System Type to Load:</p> <p style="margin-left: 40px;">1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: 2<CR></p>	

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
21	<p>When the following message appears:</p> <pre>A Distant MSCF connects to a DOD or FAA site. Is this a Distant MSCF? Yes or No [y,n,?,q]</pre> <p>Enter "n" for an MSCF on an NWS system. Enter "y" for an MSCF on a DoD or FAA system.</p> <p>Enter either: n<CR> or y<CR></p>	<p>Indicates Installing MSCF System...</p>
22	<p>When the following message appears:</p> <pre>Please enter the radar's site call letters (type 'help' for list):</pre> <p>Enter the appropriate <u>lower case</u> four-letter site mnemonic: xxxx</p> <p>Enter: xxxx<CR></p>	<p>Enter help<CR> to see a list of site mnemonics if it is unclear about which mnemonic to use.</p> <p>System responds with the system type, network number, and netmask. For example:</p> <pre>System Type is: MSCF Site Name is: kxxx or pxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128</pre> <p>Space bar will advance to the next page.</p>
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The installation will start, and it will take approximately 21 minutes to complete.</p>		
23	<p>When the following message appears:</p> <pre>Do you want to restore an adaptation archive from CD or floppy for <i>site mnemonic</i>? Yes or No [y,n,?,q]</pre> <p>Enter: y<CR></p>	<p><i>Site mnemonic</i> is kxxx or pxxx</p>

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
24	<p>When the following message appears:</p> <p>Choose the adaptation archive media to restore from:</p> <p>1 Floppy 2 CD (current install CD)</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<CR></p>	<p>At this time, adaptation data can only be restored from a diskette. Use the diskette, labeled <u>RPG ADAPTATION DATA</u>, fourth line <u>Version: 4.0</u>, provided in the kit.</p> <p>For DoD and FAA Distant MSCFs, the diskette will be labeled <u>MSCF ADAPTATION DATA</u>, fourth line <u>Version: 4.0</u>.</p>
25	<p>When the following message appears:</p> <p>Is the floppy in the drive ready?</p> <p>Insert the diskette: <u>RPG ADAPTATION DATA</u>, (or <u>MSCF ADAPTATION DATA</u> for DoD and FAA sites) and enter: y<CR></p>	System starts to mount diskette.
26	<p>When the following message appears:</p> <p>Choose the adaptation file to restore: 1. ./adapt00...<i>site specific info</i></p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<CR></p> <p>This should take less than 2 minutes.</p>	The <i>site-specific info</i> will consist of the site mnemonic and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the diskette supplied with the kit.
<p style="text-align: center;">NOTES</p> <p>System time should be checked/set to ensure accurate system operation. Steps 27 through 29 provide guidance for performing this action prior to system reboot.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
27	<p>When the following message appears:</p> <pre>Adaptation data successfully retrieved from media. MSCF Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: 4<CR> to go into the Utility Choice Menu, then enter: 1<CR> to get to a shell prompt.</p>	<p>For DoD and FAA sites, the second sentence of the prompt will read:</p> <p>Distant MSCF installation done!</p>
28	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<CR> to refresh the date/time display.</p>	<p>Allows check/set of system time prior to reboot.</p> <p>For FAA and DoD the MSCF is the master clock. Set this time as accurately as possible. For NWS, the MSCF will get the accurate clock time from the AWIPS.</p>
29	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<CR></p>	<p>Reference EHB 6-525, Table 4-77, step 3.</p>
30	<p>Once the date/time is accurate, at the # prompt, enter: exit<CR> to return to the main load menu.</p>	

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
31	<p>When the following message appears:</p> <p>Choose System Type to Load:</p> <p>1 RPG</p> <p>2 MSCF</p> <p>3 BDDS</p> <p>4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: q<CR></p>	This will allow selection of a system reboot.
32	<p>When the following message appears:</p> <p>Do you want to reboot the system?</p> <p>Enter: y<CR></p> <p>This should take approximately 2.5 minutes.</p>	<p>Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.</p>
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The MSCF is now fully functional and applications are loaded/started. The remaining steps are for setting the root password and loading the EPSS.</p>		
33	<p>At the CDE login screen (at the bottom), click and hold Options then select Command Line Login.</p> <p>After three lines of comments appear, there is no prompt.</p>	<p>Will enable login as root outside of the CDE.</p> <p>If Login window disappears, this step must be repeated.</p>
34	<p>Enter: <CR></p>	Necessary to get to a <i>site mnemonic</i> console login: prompt.
35	<p>At the <i>site mnemonic</i> console login: prompt, enter: root<CR></p>	At this point, the system will not prompt for a root password because it is not yet set.
36	<p>At the # prompt, enter: eject cdrom<CR></p>	CD-ROM cradle opens.

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
37	Remove the CD-ROM and close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG LOAD MEDIA Version 4.0</u> .
38	At the # prompt, enter: passwd<CR>	The system prompts the user to enter a new password.
39	At the New password: prompt, enter the desired: root_password<CR>	The system prompts the user to re-enter the new password.
40	At the Re-enter new password: prompt, re-enter the desired: root_password<CR>	Indicates the password was successfully changed for root.
41	Open the CD-ROM drive at the MSCF, place the CD-ROM labeled <u>RPG EPSS Files...Use with RPG Build 4.0</u> into the CD-ROM drive and close the cradle.	
42	At the # prompt, enter: cd /usr/local/bin<CR>	Changes to the directory where local executables are stored.
43	At the # prompt, enter: ./install_epss.ksh<CR>	Starts the script to install the EPSS.
44	When the following message appears: This script loads the EPSS. Please put the EPSS CD in the CD drive now. Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q] Enter: y<CR> This should take approximately 2 minutes. When the EPSS installation is complete the # prompt returns.	Installs the EPSS to provide on-line operator help screens. The EPSS icon (of an RDA tower and shelter with a question mark) will be placed on the left side of the Control Panel on the next login as a normal user.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
45	At the # prompt, enter: eject cdrom<CR>	CD-ROM cradle opens.
46	Remove the CD-ROM and close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG EPSS Files...Use with RPG Build 4.0.</u>
47	At the # prompt, enter: eject<CR>	
48	When the following message appears: /vol/dev/rdiskette0 /... The diskette can now be manually ejected. Press the button on the right side of the diskette drive and remove the diskette.	This is the diskette labeled <u>RPG ADAPTATION DATA</u> or <u>MSCF ADAPTATION DATA</u> .
49	At the # prompt, enter: exit<CR> System returns to the CDE login window after approximately 30 seconds.	
50	Log into the CDE as a regular site user. <u>DO NOT OPEN AN RPG Human Computer Interface (HCI) DISPLAY</u> , because the MSCF is not compatible with the RPG until both have Build 4.0 loaded.	When logging into the CDE at the MSCF, an MSCF Display should automatically start.
51	Advise the site operators not to open an HCI until the RPG loading is complete.	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;"><u>DO NOT OPEN AN RPG HCI DISPLAY</u> at the MSCF until Build 4.0 has been completely loaded on the RPG. If an HCI is opened prematurely, the MSCF may show erroneous information and lock up.</p>		

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>All normal user accounts have been set up with a default CDE “look” which includes one <code>Console</code> window, one <code>Terminal</code> window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, log out of CDE to save the new desktop “look”. Inform all users that when they start the Electronic Performance Support System (EPSS) with the icon on the Control Panel, they should use Netscape’s Edit Preferences option to set both the Fixed and Variable Width fonts to Application (Dt) Size 12. Refer to EHB 6–526 Operations Instructions for specific procedures concerning setup and use of the EPSS.</p>		
52	<p>If the site wants to allow a remote MSCF (i.e., laptop computer) to dial in, perform this step and the following step. If not, skip to the next series of notes which follow step 53.</p> <p>At the <code>user:</code> prompt, enter: remote_mscfserver<CR></p>	This temporarily starts the Remote MSCF Server application which can later be used to display graphical MSCF windows at a “remote MSCF” location (e.g., the RDA/RPG Remote Access Terminal (RRRAT)). At this point, it will only be temporarily started to set a password.
53	At the Remote MSCF Server application <code>Password:</code> prompt, enter the desired site-unique password. At the <code>Verify:</code> prompt, reenter the same password.	The site System Administrator will normally control this password. After setting the password, the Remote MSCF Server is not actually running. When actually needed for remote graphical access, it will be restarted through a remote terminal session.
<p style="text-align: center;">NOTES</p> <p>If it is necessary to restore the user accounts (data only), use procedures specified in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V50, Table 4-68.</p> <p>Since the RPG is currently running at Software Build 3.0, the MSCF will not be compatible with the RPG. ATTACHMENT 2 must be completed before verifying if the MSCF is operational. Once ATTACHMENT 2 is completed, if the MSCF is not operational, call the WSR-88D Hotline at (800) 643-3363.</p>		
54	For NWS and DoD: If the site has an RPG, proceed to ATTACHMENT 2 .	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
55	<u>For NWS only:</u> If the site has a distant MSCF, proceed to ATTACHMENT 3 (if there is a BDDS). If no BDDS, proceed to ATTACHMENT 4 once the RPG(s) have been successfully loaded.	

ATTACHMENT 2

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Technical Manuals Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 1, dated 30 April 2003
NWS: EHB 6-525, Revision 1
DoD: AFTO 31P1-4-108-452-1, Revision 1
FAA: Order 6345.1 V49, Revision 1

Material Required:

3 new 3 1/2-inch formatted diskettes (provided by the site).

Initial Conditions:

RPG operational and in control of the RDA.

NOTES

The MSCF is the operating position for the WSR-88D radar. If the MSCF is remote from the RPG, the load dates for the RPG and MSCF must be coordinated.

If the following full system software load is aborted on the RPG for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with NWS EHB 6-525, AFTO 31P1-4-108-452-1, and FAA Order 6345.1 V49, Table 4-83 after the full software load is successfully completed.

If the screen is blank and this is being performed at the RPG workstation, (with a BDDS client), Raritan user must be selected. (FAA will not see this option as no BDDS clients are installed on their radars.) Activate mouse and use the on-screen menus to log in as **raritan<CR>** user (no password) or, if a screen saver is not active yet, press the **<Scroll Lock>** key twice quickly to activate the on-screen menus.

Select the RPG user channel.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If simultaneously loading the MSCF and the RPG, call the MSCF site and ask if all modifications to adaptation data (Steps 4, 5 and 6 of ATTACHMENT 1) have been completed at the MSCF.</p> <p>If at the RPG, Steps 2 through 6 of ATTACHMENT 1 can also be visually verified as another check to ensure only Build 4.0 products are listed.</p>		
1	If not logged in, log in as a regular site user. <u>For FAA only:</u> Be on the active/controlling RPG channel.	
2	If there is not an HCI, open one. In a Terminal window, at the <i>user:</i> prompt, enter: hci &<CR>	The HCI will be used to send out a free text message and to put the RDA into Standby

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
3	<p>Send out a free text message using the <code>Console Messages</code> window under the <code>Applications</code> column.</p> <p>Click on the Console Messages icon.</p> <p>Click on All Destinations under the Other category.</p> <p>Click on All Destinations under the Class 1 category.</p> <p>Click on the <code>Outgoing Messages: edit</code> block to reposition the cursor.</p> <p>Using the keypad, enter the desired message.</p> <p><u>For NWS and DoD:</u> State: The xxxx radar will be down for approximately 2 hours for Build 4.0 software loading. Estimated time back on line will be ____ GMT.</p> <p><u>For FAA only:</u> State: The xxxx radar will be down for approximately 2 hours for Build 4.0 software loading. Inactive channel loading starts at (1800) GMT. Estimated outage will be from (1900) to (2100) GMT.</p> <p>After clicking on the Send button, click on the Close button to close the <code>Console Messages</code> window.</p>	<p><u>For FAA only</u>, the 2-hour down period will not start until loading of the inactive channel is nearly complete. The scheduled 2-hour outage will start approximately 1 hour after starting loading of the inactive channel.</p> <p>Response in feedback line of the HCI will read: <code>Sending Console Message.</code></p>
4	Send out any other applicable free text messages, emails, or make phone calls to any other agencies that require notification of your site being off-line.	
5	<p><u>For NWS and DoD:</u> In the RDA box, click the Control button. In the RDA State section, click on Standby and Yes. Close the <code>RDA Control/Status</code> Window.</p> <p><u>For FAA only:</u> Go physically to the inactive/non-controlling RPG channel. The inactive/non-controlling RDA is already in Standby. Continue with the next step.</p>	<u>For NWS and DoD:</u> The RDA will be in Standby state with the antenna in park prior to the software being loaded.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
6	Open a new Terminal window. At the <i>user:</i> prompt, enter: save_adapt_floppy<CR>	To open a terminal window, right click on an open screen, select Tools, then select Terminal. This starts the RPG adaptation data save program.
7	When the following message appears: ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready Insert a new diskette in the RPG processor, then enter: <CR>	This continues the RPG adaptation data save program.
8	When the following message appears: ---> Mounting floppy ---> Saving RPG adaptation data to / floppy/floppy0 Saving RPG adaptation data . . . User is returned to the <i>user:</i> prompt. Manually press the button on the front of the floppy drive to eject the diskette.	This completes the RPG adaptation data save for Build 3.0. Ejects diskette.
9	Remove the diskette. Move the write protect tab to the write protect position. Label the diskette with the following information: RPG Adaptation Data Build 3.0 Date the backup was made Site ID Store this diskette in a safe location.	This diskette will be used during the Merge Program at step 56. It can also be used if Build 3.0 is reloaded.

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>The full system load script will automatically backup user IDs and passwords in case backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).</p> <p>Backup/restoral of user account data is not mandatory. However, if there are important logs or graphic screen captures stored in the user account directories and if these need to be retained, then backup the RPG user account directories using the procedures specified in EHB 6-525, AFTO 31P1-4-108-452-1, FAA 6345.1 V49, Table 4-61.</p>		
10	Close all windows and terminals, including those minimized.	
<p style="text-align: center;">NOTES</p> <p>Steps 11 through 12 contain methods to halt the system in a normal manner.</p> <p>Should these methods not work and there is no ok prompt (possible system corruption), use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot. This stops the boot process. Proceed to step 13.</p>		
11	Exit out of Common Desktop Environment (CDE) by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the Logout Confirmation window.	This leaves the CDE and the CDE login reappears.
12	Push the button below the green LED on the front of the RPG processor. Wait until the ok prompt appears which will take approximately 80 seconds.	No immediate response for approximately 50 seconds, then another 30 seconds to complete the shutdown. Halts the system and system goes to an ok prompt.
13	Open the CD-ROM drive at the RPG, place the CD-ROM labeled, <u>RPG LOAD MEDIA Version 4.0</u> , in the CD-ROM drive and close the cradle.	Each site received two copies of identical software. Either copy can be used.
14	At the ok prompt, enter: set-defaults<CR>	Ensures all NVRAM settings are returned to default values.

NWS: EHB-6, Software Note 22
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FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
15	At the ok prompt, enter: boot cdrom<CR>	Boots the CD-ROM disk. Some disk errors may be noted; however, they are not relevant at this point. Disregard the hsfs mount failed, trying ufs... message.
16	In approximately 2 minutes, when the following message appears: Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q] Enter: 1<CR>	Indicates Installing RPG System...
17	When the following message appears: Please enter the radar's site call letters (type 'help' for list): Enter the appropriate <u>lower case</u> four-letter site mnemonic: xxxx Enter: xxxx<CR>. <u>For NWS and DoD:</u> Proceed to step 19 while the software is loading. <u>For FAA only:</u> Proceed to the next step.	Enter help<CR> to see a list of site mnemonics if it is unclear about which mnemonic to use. System responds with the system type, network number, and netmask. For example: System Type is: RPG Site Name is: kxxx or pxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
18	<p><u>For FAA only:</u></p> <p>When the following message appears:</p> <p>Is this channel 1 or 2?</p> <p>Enter: 1<CR> or 2<CR></p> <p>Depending on the channel being loaded. Proceed to next step while software is loading.</p>	
19	While the software is loading, cycle the power switch off for five seconds and then back on at the rear of all three communication servers (UD70/170A15, A16 and A17). The A15-A17 labels are midway up on the front middle of the cabinet.	This is necessary to allow for the communication servers to upload new internal operating software if it changed on the RPG processor as part of the new software load. The upload will not actually occur until the RPG processor itself is booted in subsequent steps (but still before the RPG applications software starts).
<p style="text-align: center;">NOTES</p> <p>The installation will start and take approximately 21 minutes to complete.</p> <p>If the screen is timed out and this is being performed at the RPG workstation in the RPGPCA, Raritan user must be selected. Activate mouse and use the on-screen menus to log in as raritan<CR> user (no password) or, if a screen saver is not active yet, press the <Scroll Lock> key twice quickly to activate the on-screen menus. Then select the RPG user channel.</p>		
20	<p>When the following message appears:</p> <p>Do you want to restore an adaptation archive from CD or floppy for <i>site mnemonic</i>?</p> <p>Yes or No [y,n,?,q]</p> <p>Enter: y<CR></p>	<i>site mnemonic</i> is the site being loaded at the time (site mnemonic kxxx or pxxx).

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
21	<p>When the following message appears:</p> <p>Choose the adaptation archive media to restore from:</p> <p>1 Floppy 2 CD (current install CD)</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<CR></p>	<p>At this time, adaptation data can only be restored from a diskette. Use the diskette labeled, <u>RPG ADAPTATION DATA</u>, fourth line: <u>Version: 4.0</u> provided in the kit.</p> <p>Diskette selected.</p>
22	<p>When the following message appears:</p> <p>Is the floppy in the drive and ready?</p> <p>Yes or No [y,n,?,q]</p> <p>Insert the <u>RPG ADAPTATION DATA</u> diskette in the floppy drive and then enter: y<CR></p>	<p>System starts to mount diskette.</p> <p>This loads the Build 4.0 default adaptation data only.</p>
23	<p>When the following message appears:</p> <p>Trying to mount floppy...</p> <p>Choose the adaptation file to restore:</p> <p>1 ./adapt00001.<i>site specific info</i></p> <p>Enter numeric selection from Above, q to Quit for ? for Help: [?,??,q]</p> <p>Enter: 1<CR></p> <p>This should take less than 2 minutes.</p>	<p>The <i>site specific info</i> will consist of the site mnemonic and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the diskette supplied with the kit.</p> <p><u>For FAA only:</u> Channel 1 will have only the rpg1 file displayed. Channel 2 will have only the rpg2 file displayed.</p>

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>System time will now be checked/set to ensure accurate system operation. Steps 24 through 26 provide guidance for performing this action prior to system reboot. In NWS configurations, the clock will be automatically synchronized with AWIPS. In DoD and FAA configurations, the clock will be synchronized with the MSCF.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		
24	<p>When the following message appears:</p> <pre>Adaptation data successfully retrieved from media RPG Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: 4<CR> to go into the Utility Choice Menu, then enter: 1<CR> to get to a shell prompt.</pre>	<p>The default adaptation data is successfully retrieved from the media. The Merge Program will be executed later on in these instructions to restore the site-specific adaptable parameters.</p>
25	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<CR> to redisplay a new date/time.</p>	<p>Allows check/set system time prior to reboot.</p>

NWS: EHB-6, Software Note 22
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FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
26	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<CR></p>	Reference EHB 6-525, Table 4-77, step 3.
27	<p>Once the date/time is accurate, at the # prompt, enter: exit<CR> to return to the main load menu.</p>	
28	<p>When the following message appears:</p> <pre>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: q<CR></p>	This will allow selection of a system reboot.
29	<p><u>For FAA only:</u></p> <p>FIRST TIME THROUGH: Go to the Active Channel RPG. In the RDA box, click on the Control button, click on Standby and Yes. The RDA goes to Standby.</p> <p>In the RPG box, click on the Control button, click on Shutdown: Off, and Yes. The RPG goes to Off.</p> <p>Return to the Inactive Channel.</p> <p>SECOND TIME THROUGH: Disregard this entire step.</p>	This shuts down the Active Channel (both RDA and RPG) and prevents crosstalk between channels.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
30	When the following message appears: Do you want to reboot the system? Enter: y<CR> In approximately 2.5 minutes the CDE login window appears.	Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.
31	At the CDE Login Screen, at the bottom, click and hold Options then select Command Line Login . After three lines of comments appear, there is no prompt.	Will enable login as root outside of the CDE. If Login window disappears, step must be repeated.
32	Enter: <CR>	Necessary to get to a <i>site mnemonic</i> console login: prompt.
33	At the <i>site mnemonic</i> console login: prompt, enter: root<CR>	At this point, the system will not prompt for a root password because it is not yet set.
34	At the # prompt, enter: eject cdrom<CR>	CD-ROM cradle opens.
35	Remove the CD-ROM, close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG LOAD MEDIA Version 4.0</u> .
36	At the # prompt, enter: eject<CR>	This will start the ejection of the RPG Adaptation diskette. The diskette does not automatically eject from the drive.
37	When the message appears: /vol/dev/rdiskette0 /... The diskette can now be manually ejected. Push the button on the right of the disk drive, remove the diskette, and save it in a safe location.	This is the diskette labeled <u>RPG ADAPTATION DATA</u> .
38	At the # prompt, enter: passwd<CR>	The system prompts the user to enter a new password.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
39	At the New password: prompt, enter the desired: <i>root password</i> <CR>	The system prompts the user to re-enter the new password.
40	At the Re-enter new password: prompt, re-enter the desired: <i>root password</i> <CR>	Should indicate the password was successfully changed for root.
41	Open the CD-ROM drive at the RPG, place the CD-ROM labeled <u>RPG EPSS Files... Use with RPG Build 4.0</u> into the CD-ROM drive and close the cradle.	
42	At the # prompt, enter: cd /usr/local/bin <CR>	Changes to the directory where local executables are stored.
43	At the # prompt, enter: ./install_epss.ksh <CR>	Starts the script to install the EPSS.
44	When the following message appears: This script loads the EPSS. Please put the EPSS CD in the CD drive now. Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q] Enter: y <CR> This should take approximately 2 minutes. When the EPSS installation is complete the # prompt appears.	Installs the EPSS to provide on-line operator help screens. The EPSS icon (of an RDA tower and shelter with a question mark) will be placed on the left side of the Control Panel on the next login as a normal user.
45	At the # prompt, enter: eject cdrom <CR>	CD-ROM cradle opens.
46	Remove the CD-ROM and close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG EPSS Files... Use with RPG Build 4.0</u> .
47	At the # prompt, enter: exit <CR>	System returns to the CDE Login Confirmation window after approximately 30 seconds.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
48	At the RPG processor, when a CDE Login Screen is present, login as the regular site user. Console and Terminal windows should appear. If a Terminal window does not appear, open one.	To open a terminal window, right click on an open screen, select Tools, then select Terminal.
49	In a terminal window, at the <i>user:</i> prompt, enter: cd \$HOME<CR>	HOME is all capital letters. This changes the prompt to the V1.XX directory.
50	At the <i>V1.XX :</i> prompt, enter: mrpg shutdown<CR> This should take approximately 10 seconds.	Shuts down the RPG.
51	When the following message appears: RPG processes are notified to shutdown It will be followed by the <i>V1.XX</i> prompt.	The <i>V1.XX</i> is the version number of the software build. It should read something like V1.3 or V1.12.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The adaptation data will now be merged from the RPG Adaptation Data Build 3.0 diskette made earlier in these procedures with the RPG Adaptation Data Build 4.0 diskette received in the Build 4.0 Load kit from the ROC. The merged Adaptation Data will then be placed on two blank diskettes, one for the site to use and save (<u>Installation Diskette</u>), and the second to be returned to the ROC (<u>ROC Diskette</u>).</p>		
52	<p><u>For FAA only:</u></p> <p>FIRST TIME THROUGH: Continue to the next step.</p> <p>SECOND TIME THROUGH: Skip all the steps starting with the step 53 dealing with the Merge and go straight to Step 71 (MRPG Startup). The Match/Mismatch feature of the Redundant Channels will be used to match the merged Adaptation Data at the end of this attachment.</p>	

NWS: EHB-6, Software Note 22
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FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
53	<p><u>For NWS and DoD:</u> At the v1 . xx: prompt, enter: merge_adapt xxxx rpg1<CR></p> <p><u>For FAA only:</u> If on Channel 1, at the v1 . xx: prompt, enter: merge_adapt xxxx rpg1<CR></p> <p>If on Channel 2: at the v1 . xx: prompt, enter: merge_adapt xxxx rpg2<CR></p> <p>This should take less than 2 minutes.</p>	<p>This starts the Merge Program for the RPG.</p> <p>Recall that xxxx is the appropriate four-letter site mnemonic (in lower case).</p>
54	<p>Take two blank diskettes (provided by the site) and label them: <u>RPG Adaptation Data Build 4.0 - Installation</u> <u>RPG Adaptation Data Build 4.0 - ROC</u></p>	<p>These diskettes provided by the site will be used to record the merged adaptation data.</p>
55	<p>Make sure the write-protect tab is set to the write position to allow writing on diskette (i.e., hole is closed on diskette).</p>	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
56	<p>When the following message appears:</p> <p>Please make sure you have the following items ready before you continue:</p> <ol style="list-style-type: none">1. RPG Adaptation Data Build 3.0 floppy.2. RPG Adaptation Data Build 4.0 floppy.3. Blank formatted floppy labeled: "RPG Adaptation Data Build 4.0 - Installation".4. Blank formatted floppy labeled: "RPG Adaptation Data Build 4.0 - ROC". <p>Is RPG Adaptation Data Build 3.0 floppy in drive? (Y/N)</p> <p>Insert the diskette labeled: <u>RPG Adaptation Data Build 3.0</u> from Step 9, then enter: y<CR></p> <p>This should take less than 2 minutes.</p>	<p>This copies the Build 3.0 adaptation data that was originally on the RPG.</p>
57	<p>When the following message appears:</p> <p>Copying Build 3.0 Adaptation Data archive...</p> <p>Remove RPG Adaptation Data Build 3.0 floppy.</p> <p>Insert the RPG Adaptation Data Build 4.0 floppy.</p> <p>Is RPG Adaptation Data Build 4.0 floppy in drive? (Y/N)</p> <p>Remove the diskette labeled: <u>RPG Adaptation Data Build 3.0</u> from the drive.</p> <p>Store this diskette in a safe place if Build 3.0 needs to be reloaded on the RPG.</p>	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
58	<p>Insert the diskette labeled: <u>RPG ADAPTATION DATA</u>, fourth line: <u>Version: 4.0</u> that was provided by the ROC, then enter: y<CR></p> <p>This should take less than 2 minutes.</p>	<p>This copies the Build 4.0 adaptation data that was provided by the ROC in the Build 4.0 kit.</p>
<p style="text-align: center;">NOTES</p> <p>If error messages appear while trying to read from the RPG Adaptation Data Build 3.0 floppy, the user should verify the correct floppy is inserted and return to Step 53. If the correct floppy is inserted but an error message stills appear, the floppy or data file may be corrupt. The merge cannot be performed without this data.</p> <p>The second option would be to use the Build 3.0 adaptation diskette created when Build 3.0 was originally loaded. There may be some changes during the past several months, and those will have to be entered after the RPG load has been completed.</p> <p>If neither disk is functioning, skip to step 71 to startup the RPG with the Build 4.0 default adaptable parameters. Notify the ROC Hotline that the merge was unsuccessful. All site specific adaptable values will have to be modified based on the paper copies of the adaptable files made at the start of the Build 3.0 Software Note 21 load procedures.</p>		

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
59	<p>When the following message appears:</p> <p>Copying Build 4.0 Adaptation Data archive...</p> <p>Remove the RPG Adaptation Data Build 4.0 floppy.</p> <p>Extracting files from Build 3.0 archives...</p> <p>Extracting files from Build 4.0 archives...</p> <p>Extraction complete.</p> <p>Starting adaptation data merge...</p> <p>Old alert_threshold.lb has X messages Default alert_threshold.lb has X messages Old adapt.lb has X messages Default adapt.lb has X messages Old rda_clutter.lb has X messages Default rda_clutter.lb has X messages</p> <p>Data merge complete.</p> <p>Creating new adaptation data archive...</p> <p>Insert blank floppy labeled "RPG Adaptation Data Build 4.0 - Installation".</p> <p>Is blank Installation floppy in drive? (Y/N)</p> <p>Remove the diskette labeled: <u>RPG ADAPTATION DATA</u>, fourth line: <u>Version 4.0</u>. Save it in a safe place.</p>	<p>The two files are merged together to be used as the Build 4.0 adaptation data.</p> <p>X represents the number of messages for each category of .lb files.</p>
60	<p>Insert the blank diskette labeled: <u>RPG Adaptation Data Build 4.0 - Installation</u>. Then enter: y<CR></p> <p>This should take less than 2 minutes.</p>	<p>This copies the merged Build 4.0 adaptation data to a diskette for the site to use.</p>

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>If the Merge Program can't find the Build 4.0 Adaptation Data file on the floppy supplied from the ROC, the following message will be displayed:</p> <p style="margin-left: 40px;">RPG Adaptation Data Build 4.0 file not found on floppy.</p> <p style="margin-left: 40px;">You cannot continue without the RPG Adaptation Data Build 4.0 floppy.</p> <p style="margin-left: 40px;">If the RPG Adaptation Data Build 4.0 floppy is not available, contact the Hotline.</p> <p>If error messages appear while trying to read from the <u>RPG Adaptation Data Build 4.0</u> floppy, the user should verify they have the correct floppy inserted. If the correct floppy is inserted but does not function correctly, the floppy or data file may be corrupt. Contact the ROC Hotline for another copy of the diskette (or an electronic transfer of the appropriate files). Once these are obtained, the merge program can be performed again, repeating steps 50 through 71. While waiting for a new floppy, skip to step 71 to startup the RPG with the Build 4.0 default adaptable parameters</p> <p>If the data files copied from the floppies are corrupt and will not decompress or untar, the user will see one of the following error messages:</p> <p style="margin-left: 40px;">Error extracting Build 3.0 data archive.</p> <p style="margin-left: 40px;">Error extracting Build 4.0 data archive.</p>		

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
NOTES (Continued)		
<p>If a message appears indicating an error while extracting adaptation data from either the Build 3.0 or Build 4.0 data archive, skip to step 71 to startup the RPG with the Build 4.0 default adaptable parameters. Notify the Hotline that the merge was unsuccessful. All site specific adaptable values will have to be modified based on the paper copies of the adaptable files made at the start of the Build 3.0 Software Note 21 load procedures.</p> <p>If there is an error while actually merging the data in step 59, the following message will be displayed and the user returned to the <i>user:</i> prompt.</p> <p style="padding-left: 40px;">An error occurred while merging adaptation data. Please make sure you have the correct data files and try again. If the problem persists, call the ROC for support.</p> <p>If an error occurs during the data merge, verify that the two diskettes are the correct RPG Adaptation Data floppies for Builds 3.0 and 4.0.</p> <p>If the diskettes were not the correct ones, obtain the correct ones and then return to Step 53.</p> <p>If the floppies appear to be correct, the data may have become corrupted. Skip to step 71 to startup the RPG with the Build 4.0 default adaptable parameters. Notify the ROC Hotline that the merge was unsuccessful. All site specific adaptable values will have to be modified based on the paper copies of the adaptable files made at the start of the Build 3.0 Software Note 21 load procedures.</p>		

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
61	<p>When the following message appears:</p> <p>Copying Build 4.0 Adaptation Data archive to floppy...</p> <p>Finished creating RPG Adaptation Data Build 4.0 - Installation floppy.</p> <p>Remove floppy and use during installation of the latest RPG software.</p> <p>Insert blank floppy labeled "RPG Adaptation Data Build 4.0 - ROC".</p> <p>Is blank ROC floppy in drive? (Y/N)</p> <p>Remove the diskette labeled: <u>RPG Adaptation Data Build 4.0 - Installation</u>.</p> <p>This diskette will be used later in the load procedures to restore the merged adaptation data to the RPG.</p>	<p>The date/time group on the files will be 01 April 2003, 00-00-00Z. This date/time represents the Merge Program version, not the date/time the files were made.</p>
62	<p>On the diskette just removed, <u>RPG Adaptation Data Build 4.0 - Installation</u>, move the write protect tab to the write protect position (hole is open).</p>	
63	<p>Insert the blank diskette labeled: <u>RPG Adaptation Data Build 4.0 - ROC</u>. Then enter: y<CR></p> <p>This should take less than 2 minutes.</p>	<p>This copies the merged Build 4.0 adaptation data to a diskette to be sent to the ROC.</p>

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
64	<p>When the following message appears:</p> <p>Copying Build 4.0 Adaptation Data archive to floppy...</p> <p>Adaptation Data Merge Complete.</p> <p>Finished creating RPG Adaptation Data Build 4.0 - ROC floppy.</p> <p>Remove floppy and send to the ROC.</p> <p>Remove the diskette labeled: <u>RPG Adaptation Data Build 4.0 - ROC</u>.</p>	This diskette will be sent to the ROC at the end of the load procedures.
65	On the diskette just removed, <u>RPG Adaptation Data Build 4.0 - ROC</u> , move the write protect tab to the write protect position (hole is open).	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If there have been any problems recording the "Installation" or "ROC" diskettes, return to step 53 and redo the entire merge.</p>		
66	<p>Insert the diskette labeled: <u>RPG Adaptation Data Build 4.0 - Installation</u>.</p> <p>At the v1.xx: prompt, enter: restore_adapt_floppy<CR></p>	
67	<p>When the following message appears:</p> <p>→Restoring from Floppy →Insert the adaptation backup floppy into the floppy drive →Hit return when ready</p> <p>Press <CR></p>	The merge software output passes the data to the MSCF through this step.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
68	<p>When the following message appears:</p> <pre> ->Mounting floppy ->Restoring RPG adaptation data from /floppy/floppy0 Restoring adaptation data... Restored adaptation data from rpg: / floppy/floppy0/ adapt00040.xxxx.rpg1.date-time.Z. The restored adaptation data will be used on the next application startup. The user is returned to the v1.XX: prompt. This should take less than 2 minutes. </pre>	The Build 4.0 merged adaptation data has now been restored onto the RPG.
69	<p>At the v1.XX: prompt, enter: eject<CR></p>	
70	<p>When the following message appears:</p> <pre> /vol/dev/rdiskette0/unnamed_floppy #1 can now be manually ejected Click on the OK button. Push the drive button to manually remove the diskette labeled: <u>RPG Adaptation Data Build 4.0 - Installation</u>. Save this diskette in a safe place as it will be used if the Build 4.0 software needs to be reloaded. </pre>	
71	<p>At the v1.XX: prompt, enter: mrpg startup<CR></p>	<p>This starts up the RPG with the Build 4.0 merged adaptation data.</p> <p>For FAA only: On the second time through, the channel has ROC default parameters only.</p>

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
72	When the following message appears: RPG startup completed It will be followed by a v1.xx: prompt. Enter: hci &<CR>	This opens an RPG HCI window.
73	The RPG is now operational. If the RPG is not operational, call the WSR-88D Hotline at (800) 643-3363.	
74	<u>For FAA only.</u> FIRST TIME THROUGH. The Inactive/Non-controlling channel is now loaded with Build 4.0. The RPG software is OFF. Return to step 10 to load the other channel currently on the old build. SECOND TIME THROUGH. Both channels have Build 4.0 loaded. Continue on with the next step.	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
75	<p>The RDA is in standby.</p> <p><u>For NWS and DoD:</u> Click on the RDA Control button and click on Operate and Yes.</p> <p>Close the RDA Control/Status window</p> <p><u>For FAA only:</u> In the lower right hand corner of the HCI, if the Adapt Times: states MISMATCH with a red background, do the following three steps:</p> <ul style="list-style-type: none"> - Go to the Channel loaded first and had the Merge Program performed on it. - Make this Channel the Active/Controlling Channel. - Click on MISMATCH and Yes. This forces an update of the merged adaptation data to the other channel. <p>Click on the RDA Control button and click on Operate and Yes.</p> <p>Close the RDA Control/Status window</p>	The radar is now operating.
76	For sites with distant MSCF locations, notify the MSCF site and any agency-specific offices that Build 4.0 has been successfully loaded on the RPG(s).	
77	<p>The MSCF (or distant MSCF) can now be restored with a functional RPG HCI as both the RPG and MSCF have Build 4.0 software loaded.</p> <p><u>For FAA only:</u> This step is not necessary for the second channel.</p>	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
78	Send the diskette labeled: <u>RPG Adaptation Data Build 4.0 - ROC</u> to the following address: Radar Operations Center Configuration Management ATTN: Chris Hunt 3200 Marshall Ave Norman, OK 73072-8028	
79	<u>For DoD</u> : If supporting a BDDS, go to ATTACHMENT 3 .	
80	<u>For DoD</u> : If at an MSCF site, go to ATTACHMENT 4 .	
81	<u>For DoD and FAA</u> : If no BDDS or MSCF, proceed to ATTACHMENT 6 to report successful loading of Build 4.0.	
82	<u>For NWS only</u> : Go to ATTACHMENT 3 if there is a BDDS. Otherwise, go to ATTACHMENT 4 once the RPG(s) is successfully loaded.	

ATTACHMENT 3

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Technical Manuals Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 1, dated 30 April 2003

NWS: EHB 6-525, Revision 1

DoD: AFTO 31P1-4-108-452-1, Revision 1

FAA: Order 6345.1 V49, Revision 1

Initial Conditions:

This procedure can be performed while the radar is operational.

NOTE

If the following full system software load is aborted on the BDDS for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA Order 6345.1 V49, Table 4-83 after the full software load is successfully completed. If this is a new replacement processor or fixed disk, user accounts must also be reestablished after the load IAW EHB 6-525, Table 4-83.

Step	Action/Response	Comments
NOTES		
<p>If this is being performed at a local BDDS workstation (installed in RPGPCA cabinets), Raritan user Channel 2 (BDDS) must be selected. Activate mouse and use the on-screen menus to log in as raritan<CR> user (no password) or, if a screen saver is not active yet, press the <Scroll Lock> key twice quickly to activate the on-screen menus. Then select the BDDS user channel. Login on the screen saver with the site-specific password.</p> <p>If being performed at a remote BDDS, identify the correct On/Off button and the remote BDDS keyboard.</p> <p>The full system load script will automatically backup user IDs and passwords should backup data from these account directories be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc) in-place so backup/restoral of user account data is not mandatory.</p>		

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>Steps 1 through 3 contain methods to halt a system in a normal manner. Should these methods not work (possible system corruption), press the button on the front of the Ultra 5/10 processor assembly (below green LED) and wait 30 seconds. If the system still will not shutdown, use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot to stop the boot process. Then proceed to step 5.</p>		
1	If at the CDE Login Screen, proceed to step 3. If within the CDE continue with the next step.	
2	Exit out of Common Desktop Environment (CDE) by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the Logout Confirmation Window.	Leave the CDE.
3	Push the button below the green LED on the front of the BDDS Processor. Proceed to step 5. Takes approximately 20 seconds to complete the shutdown.	Halts the system and the system goes to an ok prompt.
4	If the system was powered off, then power the system on, and enter <Stop>A when the system starts to boot.	An ok prompt will appear.
5	At the BDDS Processor, open the CD-ROM drive, place the CD-ROM labeled <u>RPG LOAD MEDIA Version 4.0</u> in the CD-ROM drive and close the cradle.	
6	At the ok prompt, enter: set-defaults<CR>	This ensures all NVRAM settings are returned to default values.
7	At the ok prompt, enter: boot cdrom<CR>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ...</code> message.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If the load starts and it is then realized that an incorrect entry was made, let the software complete its load and then start this procedure over from the beginning. If the load is aborted while in progress, all user accounts will be lost.</p>		
8	<p>In approximately 3 minutes when the following message appears:</p> <pre>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: 3<CR></pre>	<p>Indicates Installing BDDS System...</p>
9	<p>When the following message appears:</p> <pre>Please enter the radar's site call letters (type 'help' for list): Enter the appropriate <u>lower case</u> four-letter site mnemonic: xxxx Enter: xxxx<CR></pre>	<p>Enter help<CR> to see a list of site mnemonics if it is unclear about which mnemonic to use.</p> <p>System responds with the system type, site name, network number, and netmask. For example:</p> <pre>System Type is: BDDS Site name is: kxxx or pxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128</pre>
<p style="text-align: center;">NOTES</p> <p>The installation will start and it will take approximately 21 minutes to complete.</p> <p>System time should be checked/set to ensure accurate system operation. Steps 10 and 11 provide guidance for performing this action prior to system reboot.</p>		

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
10	<p>When the following message appears:</p> <pre> BDDS Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: 4<CR> to go into the Utility Choice Menu, then enter: 1<CR> to get to a shell prompt.</pre>	
<p style="text-align: center;">NOTES</p> <p style="text-align: center;">Perform the next step even though the BDDS will synchronize with the AWIPS for NWS, or MSCF for DoD and FAA.</p> <p style="text-align: center;">The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		
11	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<CR> to refresh the date/time display.</p>	Allows check/set of system time prior to reboot.
12	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<CR></p>	Reference EHB 6-525, Table 4-77, step 3.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
13	Once the date/time is accurate, at the # prompt, enter: exit<CR> to return to the main load menu.	
14	When the following message appears: Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: q<CR>	This will allow selection of a system reboot.
15	When the following message appears: Do you want to reboot the system? Enter: y<CR>	Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">In approximately 2 minutes, the BDDS will be fully functional and applications will be loaded/started. The BDDS is then able to perform its prime function. The remaining steps are for removing the CD-ROM, setting the root password, and restoring user accounts if desired.</p>		
16	At the CDE Login Screen, at the bottom, click and hold Options then select Command Line Login . After three lines of comments appear, there is no prompt.	Will enable login as root outside of the CDE.
17	Enter: <CR>	Necessary to get to a <i>site mnemonic</i> console login: prompt.
18	At the <i>site mnemonic</i> console login: prompt, enter: root<CR>	At this point, the system will not prompt for a root password because it is not yet set.

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
19	At the # prompt, enter: eject cdrom<CR>	CD-ROM cradle opens.
20	Remove the CD-ROM and close the cradle. Save CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG LOAD MEDIA Version 4.0</u> .
21	At the # prompt, enter: passwd<CR>	The system prompts the user to enter a new password.
22	At the New password: prompt, enter the desired: root_password<CR>	The system prompts the user to re-enter the new password.
23	At the Re-enter new password: prompt, re-enter the desired: root_password<CR>	Should indicate that the password was successfully changed for root.
24	At the # prompt, enter: exit<CR> System returns to the CDE Login Screen after approximately 10 seconds.	If it is not necessary to restore any backed-up user accounts (data only), then this procedure is theoretically complete; however, the following Note provides information for setting up the CDE "look" when logging into a normal user account and into the CDE. If it is necessary to restore user accounts (data only), follow EHB 6-525, table 4-68.
25	The BDDS is now operational. If the BDDS is not operational, call the WSR-88D Hotline at (800) 643-3363.	
26	If at a site with an MSCF, proceed to ATTACHMENT 4 , MSCF Restoration.	
27	If site does not have an MSCF, then DoD and FAA proceed to ATTACHMENT 6 , and NWS proceed to Attachment 7 .	

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 4.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
NOTES		
<p>To close out the BDDS channel, press the <Scroll Lock> key twice quickly to activate the on-screen menu. Scroll to the RPG user channel and press <CR>. This will return the user to the RPG user channel.</p>		
<p>All normal user accounts have been set up with a default CDE "look" which includes one <code>Console</code> window, one <code>Terminal</code> window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, log out of CDE to save the new desktop "look."</p>		

ATTACHMENT 4

MSCF RESTORATION

Technical Manuals Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 1, dated 30 April 2003
NWS: EHB 6-525, Revision 1
DoD: AFTO 31P1-4-108-452-1, Revision 1
FAA: Order 6345.1 V49, Revision 1

Materials Required:

None

Initial Conditions:

The MSCF and RPG must have Build 4.0 successfully loaded. For FAA sites, both RPGs must be successfully loaded with Build 4.0.

Step	Action/Response	Comments
NOTE		
The following steps may require the assistance of site operators.		
1	IF the RPG HCI is not open, at the MSCF, click on the RPG HCI button. The RPG Control/Status window (HCI) opens.	The site-specific clutter files are recreated for the new build.
2	On the HCI, in the Applications area on the right side of the screen, click on the Clutter Regions icon. The Clutter Regions window opens.	
3	In the Clutter Regions window, click on the File button and the Clutter Region Files window appears.	
4	In the Clutter Region Files window, double-click the clutter region file to be used for daily operations.	This selected file now appears on the Clutter Regions window.
5	Click Close to close the Clutter Region Files window.	
6	On the Clutter Regions window, click Download and Yes to download the selected clutter region file to the RDA.	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
7	Click Close to close the Clutter Regions window.	
8	Under the Applications column of the HCI, click on the Environmental Data icon. This opens the Environmental Data Editor window.	Updates can be done graphically using the mouse on the Environmental Data Editor window.
9	In the Environmental Data Editor window, click on the Data Entry button. This opens the Environmental Data Entry window.	
10	<p>In the Environmental Data Entry window, verify and update with assistance from the site operator:</p> <ul style="list-style-type: none">- Environmental Winds- The 0 degrees and -20 degrees Hail Temperature Heights- Default Storm Motion <p>Click Save and Yes if any changes are made.</p> <p>Enable VAD update, if desired.</p>	
11	Click on the Close buttons in the Environmental Data Entry window and the Environmental Data Editor window.	
12	At the HCI, in the RPG Box, click on the Products button. This opens the RPG Products window.	
13	In the RPG Products window, click on the Alert/Threshold button. This opens the Alert Threshold Editor window.	

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
14	<p>The Alert Threshold Editor window opens with the Grid Group as the default. Go to the far right column, Paired Product, and check each paired product listed on the column to make sure there is not a black rectangle in the Paired Product column.</p> <p>If there are no black rectangles, skip to the next step.</p> <p>If there is a black rectangle, this indicates that a product available in Build 4.0 needs to be listed for alert pairing. Do the following:</p> <ul style="list-style-type: none">- Click on the padlock in the upper right hand corner of the Alert Threshold Editor window, and do the next three actions.<ol style="list-style-type: none">1. Click on the URC button.2. Click in the password: edit box.3. Enter the URC password, then press <CR>.- In the Paired Products column, click on the pull down menu arrow to the left of the product number.- Click on a product listed in Build 4.0. This product then automatically replaces the black rectangle and returns the operator to the Alert Threshold Editor window.	

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
15	<p>Still in the Alert Threshold Editor window, click on the Volume Group button. Go to the far right column, Paired Product, and check each paired product listed on the column to make sure there is not a black rectangle in the Paired Product column.</p> <p>If there are no black rectangles, skip to the next step.</p> <p>If there is a black rectangle, this indicates that a product available in Build 4.0 needs to be listed for alert pairing. Do the following:</p> <ul style="list-style-type: none">- If padlock is not already open, click on the padlock in the upper right hand corner of the Alert Threshold Editor window, and do the next three actions.<ol style="list-style-type: none">1. Click on the URC button.2. Click in the password: edit box.3. Enter the URC password, then press <CR>.- In the Paired Product column, click on the pull down menu arrow to the left of the product number.- Click on a product listed in Build 4.0. This product then automatically replaces the black rectangle and returns the operator to the Alert Threshold Editor window.	

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
16	<p>Still in the Alert Threshold Editor window, click on the Forecast Group button. Go to the far right column, Paired Product, and check each paired product listed on the column to make sure there is not a black rectangle in the Paired Product column.</p> <p>If there are no black rectangles, skip to the next step.</p> <p>If there is a black rectangle, this indicates that a product available in Build 4.0 needs to be listed for alert pairing. Do the following:</p> <ul style="list-style-type: none"> - If padlock is not already open, click on the padlock in the upper right hand corner of the Alert Threshold Editor window, and do the next three actions. <ol style="list-style-type: none"> 1. Click on the URC button. 2. Click in the password: edit box. 3. Enter the URC password, then press <CR>. - In the Paired Product column, click on the pull down menu arrow to the left of the product number. - Click on a product listed in Build 4.0. This product then automatically replaces the black rectangle and returns the operator to the Alert Threshold Editor window. 	
17	In the Alert Threshold Editor window, if any changes were made, click on Save and Yes to save the changes.	
18	Close the Alert Threshold Editor window by clicking on the Close button.	
19	In the RPG Products window, click on the Algorithms button.	The Algorithms window appears.

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
20	In the <code>Algorithms</code> window, second line, Adaptation Item scroll box, scroll down to the Hydromet Rate algorithm and click on Hydromet Rate .	The Hydromet Rate algorithm appears.
21	<p>Go to the third line from the bottom, Max Precipitation Rate (MXPRA).</p> <p>If the value is the same as the site MXPRA value written down in Step 11 (ATTACHMENT 1), then close the <code>Algorithms</code> window by clicking on the Close button.</p> <p>If the value is not the same as the site MXPRA value written down in Step 11 (ATTACHMENT 1), then enter the site value in this block by performing the following actions:</p> <ol style="list-style-type: none"> 1. Click on the Padlock (upper right hand corner) 2. Click on URC button 3. Click in the Password Edit block 4. Enter in the URC password 5. Click on the MXPRA value, change the current value to be the correct value, and press <CR> 6. Click on the Save button, then click on Yes. 7. Close the <code>Algorithms</code> window by clicking on the Close button. 	
22	Close the <code>RPG Products</code> window by clicking on the Close button.	
23	In the HCI, the <code>RPG/Control Status</code> window shows the software build number (e.g. B4.0) in the lower right corner of the screen. The software version is also distributed to all users in the General Status Message (GSM).	This verifies Build 4.0 is loaded.
24	In the HCI, click on the RPG Products button, then click the Selectable Parameters button. Verify Contour Product is no longer available.	
25	Close the <code>Edit Selectable Product Parameters</code> window by clicking on the Close button.	

NWS: EHB-6, Software Note 22
DoD: TO 31P1-4-108-608
FAA: EEM Modification Handbook 6345.1 CHG 43, Chap 40

ATTACHMENT 4 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
26	Close the <code>RPG Products</code> window by clicking on the Close button.	
27	In the HCI, click on the Comms button under the <code>USERS Group</code> . The <code>Product Distribution Comms Status</code> window opens. Verify all site Users lines are connected. Check both windows, lines 1-24 and 25-40.	
28	Close the <code>Product Distribution Comms Status</code> window by clicking on the Close button.	
29	<u>For NWS only:</u> Using ATTACHMENT 7 as a guide, report the successful loading of Build 4.0 on EMRS.	List the Equipment Code as MSCF in Block 7.
30	<u>For DoD and FAA:</u> Go to ATTACHMENT 6 to report the successful loading of Build 4.0.	

ATTACHMENT 5

EFFECTIVITY

NWS

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
Eastern Region				
ALBANY	ALBANY, NY	RPG MSCF BDDS	ALY	WN9518
BINGHAMTON	JOHNSON CITY, NY	RPG MSCF BDDS	BGM	WN9515
BOSTON	TAUNTON, MA	RPG MSCF BDDS	BOX	WN9509
BROOKHAVEN	UPTON, NY	RPG MSCF BDDS	OKX	WN9912
BUFFALO	BUFFALO, NY	RPG MSCF BDDS	BUF	WN9528
BURLINGTON	SOUTH BURLINGTON, VT	RPG MSCF BDDS	BTV	WN9617
FT DRUM CARIBOU	SOUTH BURLINGTON, VT CARIBOU, ME	MSCF RPG MSCF	BTV CAR	WN9617 WN9712

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CHARLESTON, SC	CHARLESTON, SC	RPG MSCF BDDS	CHS	WN9208
CHARLESTON, WV	CHARLESTON, WV	RPG MSCF BDDS	RLX	WN9414
CINCINNATI	WILMINGTON, OH	RPG MSCF BDDS	ILN	WN9710
CLEVELAND	CLEVELAND, OH	RPG MSCF BDDS	CLE	WN9524
COLUMBIA	WEST COLUMBIA, SC	RPG MSCF BDDS	CAE	WN9310
GREER	GREER, SC	RPG MSCF BDDS	GSP	WN9312
MOREHEAD CITY	NEWPORT, NC	RPG MSCF BDDS	MHX	WN9307
NORFOLK	WAKEFIELD, VA	RPG MSCF BDDS	AKQ	WN9952
DOVER AFB	WAKEFIELD, VA	RPG MSCF BDDS	AKQ	WN9952

ATTACHMENT 5 (Continued)

EFFECTIVITY			
NEXRAD Site Name	City, ST	EQP	SID ORG Code
PHILADELPHIA	MOUNT HOLLY, NJ	RPG MSCF BDDS	PHI WN9950
PITTSBURGH	CORAOPOLIS, PA	RPG MSCF BDDS	PBZ WN9917
PORTLAND, ME	GRAY, ME	RPG MSCF BDDS	GYX WN9938
RALEIGH/DURHAM	RALEIGH, NC	RPG MSCF BDDS	RAH WN9306
ROANOKE	BLACKSBURG, VA	RPG MSCF BDDS	RNK WN9954
STATE COLLEGE	STATE COLLEGE, PA	RPG MSCF BDDS	CTP WN9925
STERLING	STERLING, VA	RPG MSCF BDDS	LWX WN9931
WILMINGTON	WILMINGTON, NC	RPG MSCF BDDS	ILM WN9301

Southern Region

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ALBUQUERQUE	ALBUQUERQUE, NM	RPG MSCF BDDS	ABQ	WP9365
CANNON AFB AMARILLO	ALBUQUERQUE, NM AMARILLO, TX	MSCF RPG MSCF BDDS	ABQ AMA	WP9365 WP9363
ATLANTA	PEACHTREE CITY, GA	RPG MSCF BDDS	FFC	WP9219
ROBINS AFB AUSTIN/SAN ANTONIO AUSTIN/SAN ANTONIO	PEACHTREE CITY, GA NEW BRAUNFELS, TX	MSCF RPG MSCF BDDS	FFC EWX EWX	WP9219 WP9253 WP9253
LAUGHLIN AFB BIRMINGHAM	NEW BRAUNFELS, TX ALABASTER, AL	MSCF RPG MSCF BDDS	EWX BMX BMX BMX	WP9253 WP9957 WP9957 WP9957
NORTHEAST ALABAMA	HUNTSVILLE, AL	RPG MSCF BDDS	HUN HUN BMX	WP9914 WP9914 WP9957
MAXWELL AFB BROWNSVILLE	ALABASTER, AL BROWNSVILLE, TX	MSCF RPG MSCF BDDS	BMX BRO	WP9957 WP9250

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CORPUS CHRISTI	CORPUS CHRISTI, TX	RPG MSCF BDDS	CRP	WP9251
DALLAS/FT WORTH	FORT WORTH, TX	RPG MSCF BDDS	FWD	WP9259
FT HOOD	FORT WORTH, TX	MSCF	FWD	WP9259
EL PASO	SANTA TERESA, NM	RPG MSCF	EPZ	WP9270
HOLLOMAN AFB	SANTA TERESA, NM	MSCF	EPZ	WP9270
EL PASO	SANTA TERESA, NM	BDDS	EPZ	WP9270
HOUSTON	DICKINSON, TX	RPG MSCF BDDS	HGX	WP9935
JACKSON/BRANDON, MS	JACKSON, MS	RPG MSCF BDDS	JAN	WP9235
COLUMBUS AFB	JACKSON, MS	MSCF	JAN	WP9235
COLUMBUS AFB	JACKSON, MS	RBDDS	JAN	WP9235
JACKSONVILLE	JACKSONVILLE, FL	RPG MSCF BDDS	JAX	WP9206
MOODY AFB	JACKSONVILLE, FL	MSCF	JAX	WP9206
KEY WEST	BOCA CHICA KEY, FL	RPG MSCF BDDS	BYX	WP9201

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
KNOXVILLE	MORRISTOWN, TN	RPG MSCF BDDS	MRX	WP9325
LAKE CHARLES	LAKE CHARLES, LA	RPG MSCF BDDS	LCH	WP9240
FT POLK	LAKE CHARLES, LA	MSCF	LCH	WP9240
LITTLE ROCK	NORTH LITTLE ROCK, AR	RPG MSCF BDDS	LZK	WP9340
LUBBOCK	LUBBOCK, TX	RPG MSCF BDDS	LUB	WP9933
MELBOURNE	MELBOURNE, FL	RPG MSCF BDDS	MLB	WP9204
MEMPHIS	MEMPHIS, TN	RPG MSCF BDDS	MEG	WP9334
MIAMI	MIAMI, FL	RPG MSCF BDDS	MFL	WP9918
MIDLAND/ODESSA	MIDLAND, TX	RPG MSCF BDDS	MAF	WP9265

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MOBILE	MOBILE, AL	RPG MSCF BDDS MSCF	MOB MOB MOB	WP9223 WP9223 WP9223
EGLIN AFB	MOBILE, AL			
NASHVILLE	OLD HICKORY, TN	RPG MSCF BDDS	OHX	WP9327
NORMAN	NORMAN, OK	RPG	OUN	WP9921
NORMAN	NORMAN, OK	MSCF	OUN	WP9921
NORMAN	NORMAN, OK	BDDS	OUN	WP9921
ALTUS AFB	NORMAN, OK	MSCF	OUN	WP9921
ALTUS AFB	NORMAN, OK	RBDDS	OUN	WP9921
VANCE AFB	NORMAN, OK	MSCF	OUN	WP9921
VANCE AFB	NORMAN, OK	RBDDS	OUN	WP9921
SAN ANGELO	SAN ANGELO, TX	RPG	SJT	WP9263
SAN ANGELO		MSCF		
DYESS AFB	SAN ANGELO, TX	MSCF	SJT	WP9263
SAN JUAN FAA	SAN JUAN, PR	BDDS MSCF	SJU	WP9526
SHREVEPORT	SHREVEPORT, LA	RPG MSCF BDDS	SHV	WP9248
SLIDELL	SLIDELL, LA	RPG MSCF BDDS	LIX	WP9919

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
TALLAHASSEE	TALLAHASSEE, FL	RPG MSCF BDDS	TLH	WP9214
FT RUCKER TAMPA	TALLAHASSEE, FL RUSKIN, FL	MSCF RPG MSCF BDDS	TLH TBW	WP9214 WP9961
TULSA	TULSA, OK	RPG MSCF BDDS	TSA	WP9356
WESTERN ARKANSAS	TULSA, OK	RPG MSCF BDDS	TSA	WP9356
Central Region				
ABERDEEN	ABERDEEN, SD	RPG MSCF BDDS	ABR	WR9659
BISMARCK	BISMARCK, ND	RPG MSCF BDDS	BIS	WR9764
MINOT AFB CHEYENNE	BISMARCK, ND CHEYENNE, WY	MSCF RPG MSCF BDDS	BIS CYS	WR9764 WR9564

ATTACHMENT 5 (Continued)

EFFECTIVITY			
NEXRAD Site Name	City, ST	EQP	SID ORG Code
CHICAGO	ROMEDEVILLE, IL	RPG	LOT WR9969
		MSCF	
		BDDS	
DENVER	BOULDER, CO	RPG	BOU WR9469
		MSCF	
		BDDS	
DES MOINES	JOHNSTON, IA	RPG	DMX WR9546
		MSCF	
		BDDS	
DETROIT	WHITE LAKE, MI	RPG	DTX WR9954
		MSCF	
		BDDS	
DODGE CITY	DODGE CITY, KS	RPG	DDC WR9451
		MSCF	
		BDDS	
DULUTH	DULUTH, MN	RPG	DLH WR9745
		MSCF	
		BDDS	
PADUCAH	PADUCAH, KY	RPG	PAH WR9957
		MSCF	
		BDDS	
FT CAMPBELL EVANSVILLE	PADUCAH, KY	MSCF	PAH WR9957
		RPG	PAH WR9957
		MSCF	
		BDDS	

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
FARGO/GRAND FORKS	GRAND FORKS, ND	RPG MSCF BDDS	FGF	WR9750
GOODLAND	GOODLAND, KS	RPG MSCF BDDS	GLD	WR9465
GRAND ISLAND	HASTINGS, NE	RPG MSCF BDDS	GID	WR9552
GRAND JUNCTION	GRAND JUNCTION, CO	RPG MSCF BDDS	GJT	WR9476
GRAND RAPIDS	GRAND RAPIDS, MI	RPG MSCF BDDS	GRR	WR9635
GREEN BAY	GREEN BAY, WI	RPG MSCF BDDS	GRB	WR9645
INDIANAPOLIS	INDIANAPOLIS, IN	RPG MSCF BDDS	IND	WR9438
JACKSON, KY	JACKSON, KY	RPG MSCF BDDS	JKL	WR9956
LA CROSSE	LA CROSSE, WI	RPG MSCF BDDS	ARX	WR9643

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
LINCOLN	LINCOLN, IL	RPG MSCF BDDS	ILX	WR9436
LOUISVILLE	LOUISVILLE, KY	RPG MSCF BDDS	LMK	WR9423
MARQUETTE	NEGAUNEE, MI	RPG MSCF BDDS	MQT	WR9743
MILWAUKEE	DOUSMAN, WI	RPG MSCF BDDS	MKX	WR9965
MINNEAPOLIS	CHANHASSEN, MN	RPG MSCF BDDS	MPX	WR9658
NCL MICHIGAN	GAYLORD, MI	RPG MSCF BDDS	APX	WR9610
NORTH PLATTE	NORTH PLATTE, NE	RPG MSCF BDDS	LBF	WR9562
NORTHERN INDIANA	NORTH WEBSTER, IN	RPG MSCF BDDS	IWX	WR9534
OMAHA	VALLEY, NE	RPG MSCF BDDS	OAX	WR9553

ATTACHMENT 5 (Continued)

EFFECTIVITY			
NEXRAD Site Name	City, ST	EQP	SID ORG Code
PLEASANT HILL	PLEASANT HILL, MO	RPG	EAX WR9446
		MSCF	
		BDDS	
PUEBLO	PUEBLO, CO	RPG	PUB WR9464
		MSCF	
		BDDS	
QUAD CITIES	DAVENPORT, IA	RPG	DVN WR9544
		MSCF	
		BDDS	
RAPID CITY	RAPID CITY, SD	RPG	UNR WR9662
		MSCF	
		BDDS	
RIVERTON/LANDER	RIVERTON, WY	RPG	RIW WR9576
		MSCF	
		BDDS	
SIOUX FALLS	SIOUX FALLS, SD	RPG	FSD WR9651
		MSCF	
		BDDS	
SPRINGFIELD	SPRINGFIELD, MO	RPG	SGF WR9440
		MSCF	
		BDDS	
ST LOUIS	WELDON SPRING, MO	RPG	LSX WR9971
		MSCF	
		BDDS	
TOPEKA	TOPEKA, KS	RPG	TOP WR9456
		MSCF	
		BDDS	

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
WICHITA	WICHITA, KS	RPG MSCF BDDS	ICT	WR9450
Western Region				
BILLINGS	BILLINGS, MT	RPG MSCF BDDS	BYZ	WT9677
BOISE	BOISE, ID	RPG MSCF BDDS	BOI	WT9681
CEDAR CITY	SALT LAKE CITY, UT	RPG MSCF BDDS	SLC	WT9932
SALT LAKE CITY	SALT LAKE CITY, UT	RPG MSCF BDDS	SLC	WT9932
ELKO	ELKO, NV	RPG MSCF BDDS	LKN	WT9903
EUREKA (BUNKER HILL)	EUREKA, CA	RPG MSCF BDDS	EKA	WT9594
FLAGSTAFF	BELLEMONT, AZ	RPG MSCF BDDS	FGZ	WT9375

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
GLASGOW	GLASGOW, MT	RPG	GGW	WT9768
		MSCF		
		BDDS		
GREAT FALLS	GREAT FALLS, MT	RPG	TFX	WT9950
		MSCF		
		BDDS		
LAS VEGAS	LAS VEGAS, NV	RPG	VEF	WT9386
		MSCF		
		BDDS		
EDWARDS AFB LOS ANGELES	LAS VEGAS, NV OXNARD, CA	MSCF	VEF	WT9386
		RPG	LOX	WT9295
		MSCF		
MEDFORD	MEDFORD, OR	BDDS	MFR	WT9597
		RPG		
		MSCF		
MISSOULA	MISSOULA, MT	BDDS	MSO	WT9773
		RPG		
		MSCF		
PENDLETON	PENDLETON, OR	BDDS	PDT	WT9688
		RPG		
		MSCF		
		BDDS		

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
PHOENIX	PHOENIX, AZ	RPG	PSR	WT9278
		MSCF		
		BDDS		
YUMA	PHOENIX, AZ	RPG	PSR	WT9278
		MSCF		
		BDDS		
POCATELLO	POCATELLO, ID	RPG	PIH	WT9578
		MSCF		
		BDDS		
PORTLAND, OR	PORTLAND, OR	RPG	PQR	WT9698
		MSCF		
		BDDS		
RENO	RENO, NV	RPG	REV	WT9488
		MSCF		
		BDDS		
SACRAMENTO	SACRAMENTO, CA	RPG	STO	WT9914
		MSCF		
		BDDS		
BEALE AFB SAN DIEGO	SACRAMENTO, CA SAN DIEGO, CA	MSCF	STO	WT9914
		RPG		
		MSCF		
SANTA ANA MTS	SAN DIEGO, CA	BDDS	SGX	WT9918
		RPG		
		MSCF		

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SAN FRANCISCO	MONTEREY, CA	RPG MSCF BDDS	MTR	WT9933
SAN JOAQUIN VALY	HANFORD, CA	RPG MSCF BDDS	HNX	WT9389
SEATTLE	SEATTLE, WA	RPG MSCF BDDS	SEW	WT9922
SPOKANE	SPOKANE, WA	RPG MSCF BDDS	OTX	WT9785
TUCSON	TUCSON, AZ	RPG MSCF BDDS	TWC	WT9274
Alaskan Region				
ANCHORAGE FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
BETHEL FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
KING SALMON FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
MIDDLETON ISLAND	ANCHORAGE, AK	MSCF	AFC	WV9904
FAIRBANKS FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
NOME FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
SITKA FAA	JUNEAU, AK	MSCF	AJK	WV9381

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
Pacific Region				
ANDERSEN AFB	AGANA, GU	MSCF	GUM	WW9902
KAMUELA/KOHALA APT	HONOLULU, HI	MSCF	HFO	WW9182
MOLOKAI FAA	HONOLULU, HI	MSCF	HFO	WW9182
SOUTH KAUAI	HONOLULU, HI	MSCF	HFO	WW9182
SOUTH SHORE FAA	HONOLULU, HI	MSCF	HFO	WW9182
Miscellaneous				
NATL CLIMATIC DATA CTR (NCDC)	ASHEVILLE, NC	RPG	NCCN7	WN9312
NRC #1	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #1	KANSAS CITY, MO	MSCF BDDS	NRCM7	WG9163
NWSHQ TESTBED	SILVER SPRING, MD	RPG		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	MSCF		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	BDDS		WG9310
OSF-3 (RPG/KOHLER GEN)	NORMAN, OK	RPG	OSFO2	WG9410
ROC DOD RPG (KREX)	NORMAN, OK	RPG		WG9420
ROC FAA REDUNDANT (RPG 1)	NORMAN, OK	RPG RPG	CRIO2	WG9410

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ROC FAA REDUNDANT (RPG 2)	NORMAN, OK	RPG RPG	CRIO2	WG9410
ROC3 NWS RPG	NORMAN, OK	RPG		WG9410
ROC4 NWS RPG	NORMAN, OK	RPG		WG9410
WDTB RPG	NORMAN, OK	RPG		
PRC RPG	RESTON, MD	RPG MSCF BDDS	PRCV2	WG9310
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	RPG MSCF BDDS	TTCM7	WB9612
TRAINING CENTER #2 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612
DoD				
ALTUS AFB	FREDERICK, OK	RPG	FDR	FE4419
ANDERSEN AFB	ANDERSEN AFB, GU	RPG	UAM	FE5240
BEALE AFB	OROVILLE, CA	RPG	BBX	FE4686
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RPG RBDDS	KSGR4	FI5294
CAMP HUMPHREYS	YOKOTA AB, JA	MSCF		
KADENA AB	YOKOTA AB, JA	MSCF		
KUNSAN AB	YOKOTA AB, JA	MSCF		
CANNON AFB	FIELD, NM	RPG	FDX	FE4855

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RPG	GWX	FE3022
DOVER AFB	ELLENDALE STATE FOREST, DE	RPG	DOX	FE4497
DYESS AFB	MORAN, TX	RPG	DYX	FE4661
EDWARDS AFB	BORON, CA	RPG	EYX	FE2805
EGLIN AFB	RED BAY, FL	RPG RBDDS	EVX	FE2823
FT CAMPBELL	TRENTON, KY	RPG	HPX	FY4812
FT DRUM	MONTAGUE, NY	RPG	TYX	FY4846
FT HOOD	GRANGER, TX	RPG	GRK	FY4824
FT POLK	FT POLK, LA	RPG	POE	FY4825
FT RUCKER	ECHO, AL	RPG	EOX	FY4805
HOLLOMAN AFB	RUIDOSO, NM	RPG RBDDS	HDX	FE4801
KADENA AB	KADENA AB, JA	RPG	ODNR5	FH5270
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	MSCF	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	MSCF RBDDS	BIX	FE3010
KUNSAN AB	KUNSAN AB, KO	RPG RBDDS	KJKR4	FH5284
LAJES AB	SANTA BARBARA, AZR	RPG MSCF	PLA	FE4486
LAUGHLIN AFB	BRACKETVILLE, TX	RPG	DFX	FE3099

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MAXWELL AFB	CARRVILLE, AL	RPG	MXX	FE3300
MINOT AFB	DEERING, ND	RPG	MBX	FE4528
MOODY AFB	SOUTH STOCKTON, GA	RPG	VAX	FE4830
ROBINS AFB	JEFFERSONVILLE, GA	RPG	JGX	FE2067
VANCE AFB	CHEROKEE, OK	RPG	VNX	FE3029
VANDENBERG AFB	ORCUTT, CA	RPG	VBX	FE4610
		MSCF		
		BDDS		

FAA

ANCHORAGE FAA (RPG 1)	KENAI, AK	RPG	AHG	6901AJ
ANCHORAGE FAA (RPG 2)	KENAI, AK	RPG	AHG	6901AJ
BETHEL FAA (RPG 1)	BETHEL, AK	RPG	ABC	690112
BETHEL FAA (RPG 2)	BETHEL, AK	RPG	ABC	690112
FAIRBANKS FAA (RPG 1)	FAIRBANKS, AK	RPG	APD	690178
FAIRBANKS FAA (RPG 2)	FAIRBANKS, AK	RPG	APD	690178
KAMUELA/KOHALA APT(RPG 1)	KAMUELA, HI	RPG	HKM	699235
KAMUELA/KOHALA APT(RPG 2)	KAMUELA, HI	RPG	HKM	699235
KING SALMON FAA (RPG 1)	KING SALMON, AK	RPG	AKC	690137
KING SALMON FAA (RPG 2)	KING SALMON, AK	RPG	AKC	690137
MIDDLETON ISLAND (RPG 1)	MIDDLETON ISLAND, AK	RPG	AIH	690140
MIDDLETON ISLAND (RPG 2)	MIDDLETON ISLAND, AK	RPG	AIH	690140

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MOLOKAI FAA (RPG 1)	MOLOKAI, HI	RPG	HMO	699213
MOLOKAI FAA (RPG 2)	MOLOKAI, HI	RPG	HMO	699213
NOME FAA (RPG 1)	NOME, AK	RPG	AEC	690147
NOME FAA (RPG 2)	NOME, AK	RPG	AEC	690147
SAN JUAN FAA (RPG 1)	SAN JUAN, PR	RPG	JUA	69F362
SAN JUAN FAA (RPG 2)	SAN JUAN, PR	RPG	JUA	69F362
SITKA FAA (RPG 1)	BIORKA ISLAND, AK	RPG	ACG	690141
SITKA FAA (RPG 2)	BIORKA ISLAND, AK	RPG	ACG	690141
SOUTH KAUAI FAA (RPG 1)	SOUTH KAUAI, HI	RPG	HKI	699211
SOUTH KAUAI FAA (RPG 2)	SOUTH KAUAI, HI	RPG	HKI	699211
SOUTH SHORE FAA (RPG 1)	NAALEHU, HI	RPG	HWA	699201
SOUTH SHORE FAA (RPG 2)	NAALEHU, HI	RPG	HWA	699201

ATTACHMENT 6

RPG GROUP SOFTWARE BUILD 4.0 LOAD COMPLETION FORM

DoD and FAA only will complete this form
NWS: Report Completion in EMRS Only

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Equipment Modified (SID) RPG _____ MSCF _____ (R)BDDS _____
FAA Only: RPG(2) _____

Problem(s) Encountered:

Upon completion of this form, return the information to the ROC using one of the four methods below:

1. Mailing Address: Program Branch, Configuration Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, OK 73072-8028
2. FAX Number: (405) 366-6553
ATTN: Configuration Management Team
3. E-mail Address: NEXRAD.CM.comments@noaa.gov
4. Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

ATTACHMENT 7
SAMPLE EMRS FORM

A26 Detail Form - ESCM2, SILVER SPRING, MD :: EMRS ANALYST - Microsoft Internet Explorer									
New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Preference Document Summary Help									
GENERAL INFORMATION									
<input type="button" value="NEW RECORD"/>		WFO* <input type="text" value="HUN"/>		Document No.* <input type="text" value="HUN30612000"/>					
1. Open Date	Open Time	2. Op Initials	3. Response Priority		4. Close Date	Close Time			
<input type="text" value="06/12/2003"/>	<input type="text" value="08:00"/>	<input type="text" value="WSH"/>	<input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable		<input type="text" value="06/12/2003"/>	<input type="text" value="11:45"/>			
5. Maintenance Description		<input type="text" value="450"/> characters left		RADAR, WSR-88D					
<input type="text" value="Install Radar Product Generator software Build 4.0"/>									
EQUIPMENT INFORMATION									
6. Station ID*	7. Equipment Code	8. Serial Number			9. TM	10. AT	11. How Mal		
<input type="text" value="HUN"/>	<input type="text" value="MSCF"/>	<input type="text" value="M4162"/>			<input type="text" value="M"/>	<input type="text" value="M"/>	<input type="text" value="999"/>		
Alert: Time Remaining: 0:00 (For Block 12 use only)									
12. EQUIPMENT OPERATIONAL STATUS TIMES									
a. Fully Operational		b. Logistic Delay		c. All Other		d. Logistic Delay		e. All Other	
Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes
<input type="text" value="3"/>	<input type="text" value="45"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING									
ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	<input type="button" value="New Row"/>					
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Delete Row"/>					
14. WORKLOAD INFORMATION									
a. Routine		b. Non-Routine		c. Travel		d. Misc		e. Overtime	
Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="3"/>	<input type="text" value="45"/>	<input type="text"/>	<input type="text"/>
MISCELLANEOUS INFORMATION									
15. Maintenance Comments		<input type="text" value="663"/> characters left		16. Tech Initials					
<input type="text" value="Installed Radar Product Generator software Build 4.0 I.A.W NEXRAD Software Mod Note 22."/>				<input type="text" value="BLB"/>					
17. SPECIAL PURPOSE REPORTING INFORMATION									
a. Mod No.	b. Mod Act/Deact Date	c. Block C	d. Trouble Ticket No.	e. Block E					
<input type="text" value="S22"/>	<input type="text" value="06/12/2003"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					

